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Market integration and price convergence in the European Union

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ABSTRACT

The implementation of international treaties in the European Union was expected to promote integration of consumer markets. Using Economist Intelligence Unit Worldwide Cost of Living Survey data, I analyze the convergence of prices for a range of traded goods and find that large price differences remain across Europe. Using high income non-euro European countries as a control group, I test the effect of the euro and the Single European Act on the convergence of prices within the European Union. Using a difference-in-difference estimation strategy, I find that the Single European Act, rather than the euro, reduced price differences and promoted market integration. Distinguishing between the two stages of the euro implementation shows increasing price divergence as a result of the common currency.

1. Introduction

The European Commission has stated that “one market needs one money”.[1] However, given the prolonged crisis in the Eurozone, the need for the single currency is being questioned. Deeper market integration brought by the Single European Act and the Maastricht Treaty was expected to improve the allocation of resources, increase competition and the standards of living. The single currency (the euro) was expected to reduce transaction costs – estimated to add up to 1% of the European Union GDP –

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[1] European Commission (1990).

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promote trade, and lead to further market integration. Removing the trade barriers and letting goods and factors of production move across borders was supposed to push prices to converge.

One way to look at market integration is by comparing prices for identical goods between countries. Following previous research, I use absolute price differences between cities (relative prices) as a simple measure of consumer market integration.[2] Relative prices are constructed using the Economist Intelligence Unit (EIU) Worldwide Cost of Living Survey. Although the European Union (EU) implemented a number of treaties increasing integration, large price differences still exist between its members.

Using the difference-in-difference estimation strategy I find that it was the Single European Act, rather than the euro that deepened market integration and facilitated price convergence. To account for global and regional trends, non-euro EU states serve as the control group for the euro states, and European Free Trade Agreement (EFTA) members serve as the control group for the EU members.

The Single European Act was ratified by most of "old" Europe in 1986, with Austria, Finland and Sweden joining in 1994. The main objective of the SEA was to create a functioning single market by 1992. All of the single market participants later signed the Maastricht treaty, requiring them to adopt the euro.[3] In 1999 eleven members of the EU gave up their domestic currencies to adopt the euro. The addition of Greece in 2001 made it twelve. The only exceptions were the United Kingdom and Denmark which were granted an opt-out that allowed them to keep their currencies.

Although the positive impact of the euro on trade has been documented, the impact of the euro on price convergence remains unclear.[4] Several studies have estimated the causal effect, with no consensus being reached. Allington et al. (2005) and Lutz (2003) use similar estimation strategies, with Allington et al. (2005) finding a significant integrating effect from the euro, while Lutz (2003) finds no support for the integrating effect of the euro.[5] Using a different data set Parsley and Wei (2008) also find no converging effect from the euro.

This paper overcomes some of the limitations that previous studies have faced. Previous studies are only based on either aggregate data, a very small sample, or a single traded good. My data closely represents the average consumer basket of an average European, with coverage of 120 traded goods. Another limitation is that when previous research was being conducted only a small number of years had passed since the introduction of the euro. This may explain why Engel and Rogers (2004) find no significant effect from the euro, since their data ends in 2003. My data covers an additional 13 years since that introduction in 1999. This allows me to distinguish between the two stages of the euro implementation. First, in January, 1999 the euro was introduced into the financial markets as an accounting currency for cash-less payments. Second, in January 2002 physical currency entered into circulation.

To measure price differences I construct bilateral relative prices by comparing two identical goods in two different European cities. While price differences in the Eurozone are the lowest, over the entire period from 1990 to 2011 they do not show a strong pattern of convergence. The convergence occurred prior to 1996 and no additional convergence is seen after the introduction of the euro in 1999.

I use a difference-in-difference estimation to measure the effect of the single market (SEA) and single currency (euro) on the relative prices between the EU members. The difference-in-difference strategy allows me to estimate the causal effect of the policies by comparing the before-after impact on the treatment group (either the Eurozone for the euro or the EU for the SEA) to the before-after impact on the control group (non-euro EU for the euro and the EFTA members for the SEA). All the specifications include city-pair, good, and time fixed effects that to control for any unobservable global trends and time invariant characteristics that I do not explicitly control for.

The results show a positive converging effect of the SEA on relative prices. Following the ratification of the SEA, relative prices for traded goods decreased by approximately 5%. However, this effect varies

[2] Bergin and Glick (2007), Engel and Rogers (2004), Parsley and Wei (2008), Goldberg and Verboven (2005).

[3] The Maastricht Treaty is also known as the Treaty on European Union as it transformed the European Community into the European Union.

[4] Baldwin (2006), Rose (2000), Eicher and Henn (2011).

[5] While in Lutz (2003) the results do vary across goods, no overall support for the integrating effect from the euro is found.